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ABSTRACT

This paper seeks to familiarize school administrators with the Vroom and Yetton Normative Leadership model by presenting its essential components and providing original case studies for its application to school settings. The five decision-making methods of the Vroom and Yetton model, including two "autocratic," two "consultative," and one group method, are introduced. Before being provided further information about the model, readers are invited to select which of the five methods applies most appropriately to each of four cases that requires administrative-level decisions in public schools. Lists of problem attributes and diagnostic questions given by Vroom and Yetton are provided, as well as their seven rules for decision-making and their model decision tree. Finding that school administrators often have difficulty with the issues of the quality of decisions and the structure of decision-making, the author emphasizes those problem attributes in applying the model's decision-making rules. The paper concludes with Vroom and Yetton's design for decision-making training. (JW)

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Model Applied to Public School Case Examples

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Running Head: Normative Leadership Model

Abstract

This paper provides academicians and practitioners with an alternative approach to leadership theory and practice. Many school administrators are familiar with the more popular leadership models (Hersey and Blanchard, Blake and Mouton), but may not be as familiar with alternative contingency models. The Vroom and Yetton Normative Leadership model is the focus for this paper. A case study approach is used to facilitate the readers understanding of the major elements of the Vroom and Yetton model.

The Vroom and Yetton Normative Leadership
Model Applied to Public School Case Examples

The topic of leadership in our organizations, and especially our schools continues to be a hot topic. Unfortunately, more heat than light is being generated in recent years. And depending upon who the reader listens to, the future for leadership in theory and practice is either very dim or very bright. According to one outspoken sage on the subject, "The most influential writers on leadership bluntly conclude that leaders do not make much of a difference on the effectiveness of their respective organizations" (Sergiovanni, 1982:330).

On the other hand, the reader might be convinced (or seduced as the case may be), that several very popular leadership models provide the wherewithal to move poorly performing schools into an arena of high achievement and creativity. The writer of course is referring to Blake and Moulton's "Managerial Grid" (1978) and Hersey and Blanchard's "Situational Leadership Theory" (1982). A battle royal is being waged between these warlords of leadership, and on occasion, the professional and academic journals delight in surfacing "the one last encounter" that resolves once and for all who will be Lord of Leadership. The year 1982 was vintage one for such journalistic skirmishes. Both Group and Organizational Studies (1982, Vol. 7, No. 2) and Training and Development Journal (1982, Vol. 36, No. 8, 10) contributed significant space for the purpose of clarifying (or confusing) the issues for the readers. What has been

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clarified for this writer is that proprietary interests are at stake, and the lack of serious research validating either model confuses the issues even more. Was Sergiovanni (1979) on target when he posed the question, "Is leadership the next great training robbery?"

Fortunately for academicians and practitioners alike, the present is not as bleak as one might imagine. There are alternative leadership models worth investigating. Fiedler's contingency theory of leadership in public school settings has been discussed by Owens (1981). Another contingency approach to leadership decision-making is provided by Vroom and Yetton (1973). The Vroom and Yetton model is a normative-prescriptive approach of leader behavior that treats leadership as a social process. The emphasis is on "events between people rather than events that occur within a person." (Vroom and Jago, 1974:743). This model addresses what decision-making process managers should or ought to use.

As a way of explaining this model, the reader is invited to study the five decision-making methods basic to the model. Table 1 describes the range of styles available to the leader for solving group problems. At one end of the continuum are the autocratic methods (AI, AII), followed by the consultative methods (CI, CII). At the other end of the continuum is the group method (GII). The Roman numeral designations indicate variations within the three methods.

Insert Table 1 about here

The author has developed four case studies for the reader's analysis. You are invited to analyze each of the cases, and according to your present decision-making philosophy, choose the method from Table 1 that you would use. Later on, you can compare your decision with those prescribed by the Vroom and Yetton Model.

Insert Cases 1, 2, 3, and 4 about here

Quality, Acceptance, Time

Quality, Acceptance and Time are identified as the critical variables for leadership decision-making. According to Maier, there are two important dimensions necessary for effective decisions: (1) the objective or impersonal quality of the decision and (2) with its acceptance or the way people who must execute the decision feel about it. (Maier, 1965:166).

The Formula

$$ED = Q \times A$$

describes this relationship. Effective decisions (ED) are a product of the degree to which the decision has quality (Q) (which concerns the objective facts) and acceptance (A) (which concerns the feelings of the persons who must execute the decisions).

The effective school administrator must be concerned not only with the rational quality of a decision, but also on how his or her implementing

followers accept the decision. The third variable has to do with the amount of time required to make the decision. Some decisions must be made quickly using autocratic methods, whereas the same problem situation with adequate lead time may be effectively resolved with consultative or group methods.

Problem Attributes

Table 2 identifies seven problem attributes and diagnostic questions that must be utilized in the analysis of problem situations. (Vroom, 1974:51) The problem attributes are the key to the Vroom and Yetton model, and they can be classified into two types: (1) those that specify the importance of quality (attribute A) and acceptance (attribute D), (2) and those attributes that moderate the effects of others participation on quality and acceptance (attributes B, C, E, F, and G).

Insert Table 2 about here

Having introduced this leadership model to principals and assistant principals in management development programs, the author finds that school administrators experience difficulty with two of the problem attributes - quality and structure. There is a concern for objective and rational correctness when investigating the quality requirements. In some situations, there is only one best (i.e., rationally correct) decision. However, in some problem situations, anyone of several

solutions may be equally satisfactory, and the school administrator can afford to be indifferent as to which solution is adopted. The extent to which a problem is structured (attribute C) is dependent on the availability of information. A problem situation is unstructured if the decision maker lacks necessary information, and conversely, the more information, the more the problem is structured.

Decision Rules and Decision Tree

The prescriptive logic basic to the Vroom and Yetton Model can be found in a series of seven decision rules (Table 3). (Vroom, 1974:53-54). The first three rules protect decision quality, and the remaining four rules are designed to protect decision acceptance. If this were not enough, Vroom and Yetton have formulated a decision tree that facilitates application. The seven problem attributes are arranged from left to right at the top of Figure 1 (Vroom, 1974:52).

Insert Table 3 and Figure 1 about here

The reader would begin problem solving by answering the question associated with the quality problem attribute ("A." Does the problem possess a quality requirement?) If the reader responds with a "yes," the decision tree directs attention to problem attribute "B". Given a "yes" or "no" response, the reader merely follows the path to a numbered problem situation. As Figure 1 indicates, there are 14 problem situations, and with each situation, there is a feasibility set of one

or more decision options (AI, AII, CI, CII, GII).

Insert Figure 2 about here

If there are more than one option in a feasibility set, then time becomes a critical variable and person-hours the criterion. Short range decisions due to pressure and other environmental factors may require as few person-hours as necessary to get the job done. The reader will note that the decision method requiring the fewest person-hours is the furthest to the left within a given feasibility set. However, if the decision maker has sufficient lead time, then a more developmental approach can be utilized, (i.e., CII or GII approaches). In other words, given a specific problem situation, the amount of time available to the decision maker may dictate more than one possible (and preferred) leadership decision method.

At this point, the reader may want to compare their preferred methods for leadership decision-making with the Vroom-Yetton prescriptions. See Table 4.

Insert Table 4 about here

Implications for Training and Development

According to one estimate by Vroom (1976), several thousand managers have received training in the theory and use of the model. School superintendents have been part of that training population. In designing the training format, Vroom and his associates clearly attempted to avoid a cognitive and mechanistic approach that was neatly packaged and marketable. Vroom's

specific concern was that at best, this "approach would influence what Argyris calls espoused theories and would not have any long-lasting behavioral effects." (Vroom, 1976). Instead, the design, which is outlined below, focussed on self-discovery and insight (Vroom and Yetton, 1973).

- Phase I. Training in recognizing differences in own and others decision processes.
- Phase II. Diagnosis of one's own leadership style.
- Phase III. Practice in using decision processes.
- Phase IV. Understanding the consequences of different decision processes.
- Phase V. Training in the normative model.
- Phase VI. Feedback based on behavior on the standardized problems.
- Phase VII. Follow up.

Fiedler believes that the adult personality is relatively "stable and difficult to change through training" (Gwens, 1981:165). On the other hand, Vroom believes that training and development can enlarge the repertoire of the managers styles (Vroom, 1976). An effective manager is one who can match their leaderships style to the demands of the situation. In this respect, the Vroom-Yetton approach is consistent with Fiedler and Hersey-Blanchard, but is inconsistent with Blake-Mouton and Argyris (1982) who advance a "one best way to manage."

Given the current membership of SINET, one may have cause to wonder if there is a relationship between the Sensing-Intuition and Thinking-Feeling scales of the Myers-Briggs Type Indicator and the choice of decision-making methods (AI, AII, CI, CII, GII). Results of a recent study by Schweiger and Jago (1982) indicate that sensing types tend to be more participative than intuitive types. The authors concluded that situational factors may be more important than personality type in influencing a particular choice of leadership style.

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Table 1

Decision Methods For Group Problems

- Autocratic I (AI) You solve the problem or make the decision yourself, using information available to you at the time.
- Autocratic II (AII) You obtain the necessary information from your subordinates, then decide the solution to the problem yourself. You may not tell you subordinates what the problem is in getting the information from them. The role played by your subordinates in making the decision is clearly one of providing the necessary information to you, rather than generating or evaluating alternative solution.
- Consultative I (CI) You share the problem with the relevant subordinates individually, getting their ideas and suggestions without bringing them together as a group. Then you make the decision, which may or may not reflect your subordinates' influence.
- Consultative II (CII) You share the problem with your subordinates as as group, obtaining their collective ideas and suggestions. Then you make the decision which may or may not reflect your subordinates' influence.
- Group II (GII) You share the problem with your subordinates as a group. Together you generate and evaluate alternatives and attempt to reach agreement (consensus) on a solution. Your role is much like that of chairman. You do not try to influence the group to adopt "your" solution, and you are willing to accept and implement any solution which has the support of the entire group.

Case I

The School Data System Case

You are on the staff of the Assistant Superintendent for Administration, and your work is on a wide variety of problems of both an administrative and a technical nature. You have been given the assignment of developing a standard method to be used in all the counties schools for the accurate reporting of FTE's, teacher/staff absences, student achievement scores, budget monitoring and utility (gas and electricity) services. Some schools have a considerably higher reporting error rate than others, and the methods used to record and transmit the data vary among the schools. It is probable that part of the error variance is a function of the specific school conditions rather than anything else, and this will complicate the establishment of any system common to all schools. You have information on error rates, but no information on specific school practices that generate these errors.

Everyone would benefit from an improvement in the quality of the data as it is used in a number of important planning decisions. Your contracts with the schools are through four Area Superintendents who are responsible for collecting the data. They are a conscientious group committed to doing their jobs well, but are highly sensitive to interference on the part of central office staff meddling in their area operations. Any solution that does not receive the active support of the area superintendent is unlikely to reduce the error rate significantly.

Case 2

The Adult Education Case

You are the vice-principal of a very large adult education evening program. The instructional staff is as follows: full-time - 16, part-time - 31. This case only concerns the 16 full-time instructional staff. Their formal education and classroom teaching experience are similar, permitting you to use them interchangeably for the various adult education courses. Yesterday, your principal informed you that a request had been received from the new adult education and vocational training center for seven of your instructional staff to transfer to that facility. Although a new facility, it was located 30 miles away in a rural area. Additionally, this new facility was in actuality an alternative school so that most of the students were low achievers and were disciplinary problems. For a number of reasons, your principal argued, and you agreed, that this request should be met by your group. All of your full-time instructional staff are capable of handling this new assignment, and from the standpoint of present and future needs, there is no particular reason why any one person should be retained over any other person. Some of the part-time staff and other entry level teachers will replace the transferring instructors.

Case 3

The School Finance Case

You are the head of a staff unit reporting to the Assistant Superintendent for Budgeting and Finance. She has asked you to provide a report on the school systems current financial status to include recommendations for changes in the budget planning process. Doubts have been raised about the efficiency of the existing system in lieu of the current national and local economic conditions, and there is considerable panic with anticipated dollars for the next fiscal year.

You plan to write the report, but at the moment you are very perplexed about the approach to take. Your own speciality is the Federal funding and grants area, and it is clear that detailed knowledge of the state and local policies/regulations would greatly enhance the value of the report. Fortunately, the three members of your staff are specialists in these two important areas. Together, they possess a vast amount of knowledge about the intricacies of school finance and budgeting. However they seldom agree on the best way to achieve anything when it comes to budget planning.

You have six weeks before the report is due. Your immediate problem is to come up with some alternatives to the school systems present practices and selection the most promising for detailed analysis in your report.

Case 4

The Bus Routing and Scheduling Case

As the Director of Transportation for the school district, one of your major responsibilities includes scheduling and routing of buses throughout the school system. Having been in this position for almost five years, you understand the nature of the beast, and you have historical data needed to compute the average amount of time needed to efficiently and effectively get students to school on time. It is important that your estimates be timely and accurate. Underestimating results in idle buses and overestimating may result in a student missing homeroom.

Progress to date has been good, especially since you now have access to a computer terminal that allows you to simulate and test various scheduling and routing configurations. Bus drivers feel they are not wasting as much time and the superintendent is happy because you have reduced fuel costs for the buses.

You have just returned from a week long "Executive School Administrators Development Program" where you were introduced to the participatory approaches to managing and leading. Given your current situation, what leadership style should you use?

Table 2

Problem Attributes Used In the Vroom/Yetton Model

Problem Attributes	Diagnostic Questions
A. The importance of the quality of the decision	Is there a quality requirement such that one solution is likely to be more rational than another?
B. The extent to which the leader possesses sufficient information/expertise to make a high-quality decision by himself or herself.	Do I have sufficient information to make a high-quality decision?
C. The extent to which the problem is structured.	Is the problem structured?
D. The extent to which acceptance or commitment on the part of subordinates is critical to the effective implementation of the decision.	Is acceptance of the decision by subordinates critical to effective implementation?
E. The prior probability that the leader's autocratic decision will receive acceptance by subordinates.	If I were to make the decision by myself, is it reasonably certain that it would be accepted by my subordinates?
F. The extent to which subordinates are motivated to attain the organizational goals as represented in the objectives explicit in the statement of the problem.	Do subordinates share the organizational goals to be obtained in solving the problem?
G. The extent to which subordinates are likely to be conflict over preferred solutions.	Is conflict among subordinates likely in preferred solutions?

Table 3

Decision Rules

1. THE INFORMATION RULE. If the quality of the decision is important and if the leader does not possess enough information or expertise to solve the problem by himself, AI is eliminated from the feasible set. (Its use risks a low-quality decision.)
2. THE GOAL CONGRUENCY RULE. If the quality of the decision is important and if the subordinates do not share the organizational goals to be obtained in solving the problem, GII is eliminated from the feasible set. (Alternatives that eliminate the leader's final control over the decision reached may jeopardize the quality of the decision.)
3. THE UNSTRUCTURED PROBLEM RULE. In decisions in which the quality of the decision is important, if the leader lacks the necessary information or expertise to solve the problem by himself, and if the problem is unstructured, i.e., he does not know exactly what information is needed and where it is located, the method used must provide not only for him to collect the information but to do so in an efficient and effective manner. Methods that involve interaction among all subordinates with full knowledge of the problem are likely to be both more efficient and more likely to generate a high-quality solution to the problem. Under these conditions, AI, AII and CI represent more cumbersome, less effective, and less efficient means of bringing the necessary information to bear on the solution of the problem than methods that do permit those with the necessary information to interact.)
4. THE ACCEPTANCE RULE. If the acceptance of the decision by subordinates is critical to effective implementation, and if it is not certain that an autocratic decision made by the leader would receive that acceptance, AI and AII are eliminated from the feasible set. (Neither provides an opportunity for subordinates to participate in the decision and both risk the necessary acceptance.)

5. THE CONFLICT RULE. If the acceptance of the decision is critical, and an autocratic decision is not certain to be accepted, and subordinates are likely to be in conflict or disagreement over the appropriate solution, AI, AII, and CI are eliminated from the feasible set. (The method used in solving the problem should enable those in disagreement to resolve their difficulties with full knowledge of the problem. Accordingly, under these conditions, AI, AII, and CI, which involve no interaction or only "one-to-one" relationships and therefore provide no opportunity for those in conflict to resolve their differences are eliminated from the feasible set. Their use runs the risk of leaving some of the subordinates with less than the necessary commitment to the final decision.)

6. THE FAIRNESS RULE. If the quality of decision is unimportant and if acceptance is critical and not certain to result from an autocratic decision, AI, AII, CI and CII are eliminated from the feasible set. (The method used should maximize the probability of acceptance as this is the only relevant consideration in determining the effectiveness of the decision. Under these circumstances, AI, AII, CI and CII, are eliminated from the feasible set. To use them is to run the risk of getting less than the needed acceptance of the decision.)

7. THE ACCEPTANCE PRIORITY RULE. If acceptance is critical, not assured by an autocratic decision, and if subordinates can be trusted, AI, AII, CI, and CII are eliminated from the feasible set. (Methods that provide equal partnership in the decision-making process can provide greater acceptance without risking decision quality. Use of any method other than CII results in an unnecessary risk that the decision will not be fully accepted or receive the necessary commitment on the part of subordinates.)

Table 4

Suggested Solutions to Cases 1 - 4 Using the
Vroom/Yetton Normative Leadership Decision-Making Model

Case 1. School Data System Case

Analysis

Questions

- A (Quality?) = yes
- B (Manager's Information?) = no
- C (Structured?) = no
- D (Acceptance?) = yes
- E (Prior Probability of Acceptance?) = no
- F (Goal Congruence?) = yes

Problem Type - 12

Feasible Set - GII

Minimum person-hours Solution - GII

Rule Violations -

- AI violates rules 1, 3, 4 and 7.
- AII violates rules 3, 4, and 7.
- CI violates rules 3 and 7.
- CII violates rule 7.

Case 2. The Adult Education Case

Analysis

Questions

- A (Quality?) = no
- D (Acceptance?) = yes
- E (Prior Probability of Acceptance?) = no
- G (Conflict?) = yes

Problem Type - 3

Feasible Set - GII

Minimum person-hours Solution - GII

Rule Violations -

- AI and AII violates rules 4, 5 and 6.
- CI violates rules 5 and 6.
- CII violates rule 6.

Case 3. The School Finance Case

Analysis

Questions

- A (Quality?) - yes
- B (Managers Information?) = no
- C (Structured?) = no
- D (Acceptance?) = no

Problem Type - 14

Feasible Set - CII, GII

Minimum person-hours Solution - CII

Rule Violations -

- AI violates rules 2 and 3.
- AII violates rule 3.
- CI violates rule 3.

Case 4. The Bus Routing and Scheduling Case

Analysis

Questions

- A (Quality?) = yes
- B (Manager's Information?) = yes
- D (Acceptance?) = no

Problem Type - 4

Feasible Set - AI, AII, CI, CII, GII

Minimum person-hours Solution - AI

Rule Violations - none

Vroom and Yetton Decision Model



Figure 2

Problem Types and the Feasible Set of Decision Methods

Problem Type	Acceptable Methods
1	AI, AII, CI, CII, GII
2	AI, AII, CI, CII, GII
3	GII
4	AI, AII, CI, CII, GII
5	AI, AII, CI, CII, GII
6	GII
7	CII
8	CI, CII
9	AII, CI, CII, GII
10	AII, CI, CII, GII
11	CII, GII
12	GII
13	CII
14	CII, GII